

# Tree/Shrub Establishment – Christmas Trees

## WV Conservation Practice Job Sheet

**Code 612**



### Definition

Establishing woody plants by planting seedlings.

### Purpose

To establish woody plants for the production of forest products - Christmas trees.

### Considerations

Christmas tree farming is not a “get-rich-quick proposition”. However, in many instances, growing Christmas trees has been shown to be an appropriate use of land.

Among the more important aspects that should be considered when undertaking Christmas tree production with are: site, species, consumer preference, planting, insect/disease problems, shaping and shearing, weed control, fire control, and marketing.

The following should be considered before you undertake any tree and shrub establishment practice:

Tree/shrub arrangement and spacing should allow for and anticipate the need for future access lanes for purposes of stand management.

Residual chemical carryover should be evaluated prior to planting and alter species selection and/or timing of planting/seeding.

Use locally adapted seedlings.

Consider associated insect, pest, and disease problems when selecting tree species.

Consider drainage class and soil type when making plant species selection.

Planting dates, and care in handling and planting of the seed, cuttings or seedlings will ensure that planted materials have an acceptable rate of survival.

### Operation and Maintenance

The practice area should be inspected in the first few months and at least annually including after storm/fire events.

Control competing vegetation by mowing, cultivating, mulching, herbicides, or plant mats.

Each site will be evaluated to determine if mulching, supplemental water or other cultural treatments will be needed to assure adequate survival and growth.

Replace dead and dying stock in newly established plantings. Maintain Christmas tree plantations at 100% stocking.

The practice area must be protected from grazing as well as, fire, insects, diseases, competing vegetation and wildlife.

Noxious weeds will be controlled.

Where practical, management activities will be performed outside the primary nesting season (March 15 - July 15). An exception may be for mowing or cultivation to control vegetative competition.



Supplemental water as well as periodic applications of nutrients may be needed to maintain plant health and vigor.

Pruning and/or removal of dead or diseased plants should be performed and timed as to not interfere with the lifecycle of the plants or the intended purpose of the planting.

Christmas tree shearing should begin as needed after the third year.

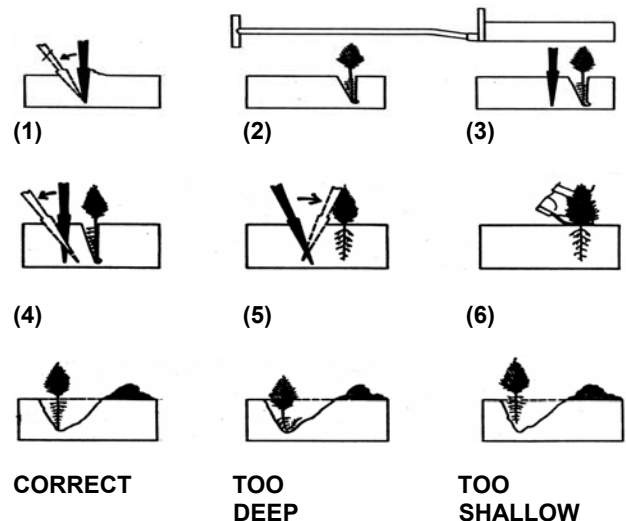
See WV conservation practice standard, Tree/Shrub Pruning, code 660.

### Specifications

Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the WV NRCS Field Office Technical Guide. See the WV conservation practice standard for Tree/Shrub Establishment, code 612, for specific requirements. Clients should work closely with NRCS personnel and WV Division of Forestry personnel when utilizing this practice.

### Planting Bar/Dibble Planting Technique

- (1) Insert the dibble straight down into the soil to the full depth of the blade and pull back on the handle to open the planting hole. (DO NOT rock the dibble back and forth as this causes soil in the planting hole to be compacted, inhibiting root growth.
- (2) Remove the dibble and push the seedling roots deep into the planting hole. Pull the seedling back up to the correct planting depth (the root collar should be  $\frac{1}{2}$  inch below the soil surface). Gently shake the seedling to allow the roots to straighten out. DO NOT twist or spin the seedling or leave the roots J-rooted.
- (3) Insert the dibble into the soil several inches in front of the seedling.
- (4) Push the handle forward to close the hole and hold the seedling in place.
- (5) Pull back on the handle to close the planting hole eliminating air pockets around the roots.
- (6) Remove the dibble and close and firm up the opening with your heel. Be careful to avoid damaging the seedling.



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## Tree/Shrub Establishment – WV Job Sheet – Christmas Trees

<b>Client:</b>	<b>Farm #:</b>
<b>Field(s):</b>	<b>Tract #:</b>
<b>Designed By:</b>	<b>Location:</b>
<b>Date:</b>	<b>Total Acres:</b>

**Purpose of Tree/Shrub Establishment:**

**Site Conditions Prior to Planting:**

**NOTE:** A precondition for tree/shrub establishment is appropriately prepared sites. Site preparation is needed if competition from grass, weeds, and/or woody materials will interfere with plant establishment and growth. Refer to practice standard Tree/Shrub Site Preparation, 490 and/or Brush Management, 314, as applicable.

**Additional Specifications:**

Is Tree/Shrub Site Preparation needed? Yes ☐ No ☐

If yes, see WV conservation practice standard Tree/Shrub Site Preparation, code 490.

Tree/Shrub Establishment Method (Refer to WV Practice Standard (612) Tree/Shrub Establishment for specific requirements)									
Field	Acres	Species <sup>1</sup>	Kind of Stock <sup>2</sup>	Method <sup>3</sup>	Planting Date	Plants / Acre	Average Spacing	Protection Method <sup>4</sup>	Total Plants

<sup>1</sup> **Species:** If available, attach USDA Plants Database (<http://plants.usda.gov>) Fact Sheet or Plant Guide for each species planned

<sup>2</sup> **Kind of Stock:** Bareroot (include size, caliper and age as applicable)

<sup>3</sup> **Method:** Mattock, Planting Dibble, Hoedad, Planting Bar, Tile Spade, Post Hole Digger, Tractor/Auger, or Tree Planting Machine.

<sup>4</sup> **Protection Method:** List as: **Repellants**, **Tree Mats**, or **Other**

SPACING	NUMBER OF SEEDLINGS PER ACRE	SPACING	NUMBER OF SEEDLINGS PER ACRE
6' X 6'	1210	10' X 10'	436
6' X 8'	908	12' X 12'	302
8' X 8'	680	15' X 15'	194
6' X 10'	726	16' X 16'	170
8' X 10'	544	20' X 20'	109
Formula: 43560 divided by (Row spacing X Seedling Spacing) = Plants / Acre			

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If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

### Additional Specifications and Notes:

### Planting Times

Trees/shrubs can be planted in the fall from the time growth stops until the soil is frozen; or in the spring after the soil has thawed until bud break which usually occurs by May 1<sup>st</sup>. Avoid fall planting in clay soils due to frost heaving.

**Additional requirements:**

### Site Preparation See WV Job Sheet Tree/Shrub Site Preparation (Code 490)

A precondition for tree/shrub establishment is appropriately prepared sites. Site preparation is needed if competition from grass, weeds, and/or woody materials will interfere with plant establishment and growth. Refer to WV conservation practice standard Tree/Shrub Site Preparation, 490 and/or Brush Management, 314, as applicable.

**Additional requirements:**

### Care, Handling , Size Requirements for Planting Stock

To optimize survival, plant seedlings immediately upon their arrival from the nursery. If this is not possible, the bundles can be stored for two days in a cool (34 -38° F), dark place. Do not unpack the bundles! Water the bundles periodically to ensure the roots are well moistened. It is critical that the roots never be allowed to dry out; exposure to the air for even a few minutes can kill your seedlings. If controlled storage is not available and seedlings cannot be planted within two days of receipt, dig a trench about one foot deep and bury the seedling roots in soil. This is called "heeling-in". See drawing on the following page. Pack the soil firmly, water thoroughly, and make certain all roots are covered. Evergreens require extreme care. When heeling in evergreens, split bundles and spread out the seedlings in the trench to make sure the root system of each seedling is protected by soil. Live cuttings that will not be immediately planted shall be promptly placed in controlled storage conditions (34-38° F) and protected until planting time. Check planting stock at the time of planting to see if it is free of disease, insects, and mechanical injury and have a well-developed root system. All conifers must have dormant buds. Seedlings shall not be less than ¼ inch in caliper at 1 inch above the root collar.

For cuttings, avoid using material less than ¾" in diameter. Rooted planting stock must not exceed a 2:1 shoot-to-root ratio and have a minimum of a 1:1 root shoot ratio. General size guidelines are as follows - Conifers - seedlings should have a minimum height of 6-12 inches and a minimum root length of 8 inches

**Additional requirements:**

### Planting Methods

Roots of bareroot stock shall be kept moist during planting operations. Any directions received with the seedlings regarding care of the seedlings while planting shall be followed. If no directions accompany the seedlings, roots of bareroot stock shall be kept moist during planting operations by placing the seedlings in a water-soil (mud) slurry, peat moss, super-absorbent (e.g., polyacrylamide) slurry or other equivalent material. Rooting medium kept moist at all times by periodic watering. Stock shall not be planted when the soil is frozen or dry. Rooted stock will be planted in a vertical position with the root collars approximately ½-inch below the soil surface. The planting trench or hole must be deep and wide enough to permit roots to spread out and down without J-rooting or L-rooting. After planting of rooted stock or cuttings, pack soil around each plant firmly to eliminate air pockets.

**Additional requirements:**

### Operation and Maintenance

The practice area must be inspected periodically and protected from damage to maintain proper function. Maintain Christmas tree stocking at 100%. Replace dead and dying stock in newly established plantings. The practice area must be protected from destructive grazing as well as, fire and pests. Noxious weeds should be controlled. Competing vegetation may be controlled by mowing, cultivating, mulching, pesticides, or plant mats.

**NOTE: NRCS does not make pesticide recommendations. Contact the local office of the West Virginia Division of Forestry or the WVU Cooperative Extension Service for assistance. Clients should request the product name, strength and amount used. All chemicals must be applied in accordance with label specifications.**

Christmas tree shearing should begin as needed after the third year. See WV conservation practice standard, Tree/Shrub Pruning, code 660.

Fertilizer is best applied in the fall or early spring, although it is not harmful to apply fertilizer at any time during the year.

**Additional requirements:**

### Protection Methods

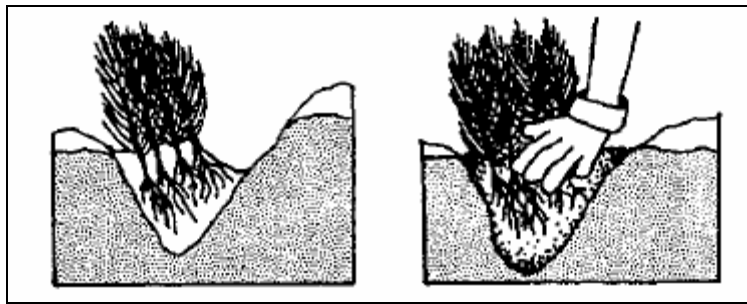
If used, tree mats and/or repellents should be installed according to manufacturer guidelines. Competing vegetation should be removed from around the protected seedlings. Protect from livestock, fire and other damage. See the WV conservation practice standards, Use Exclusion, 472 and Firebreak, 394.

**Additional Requirements:**

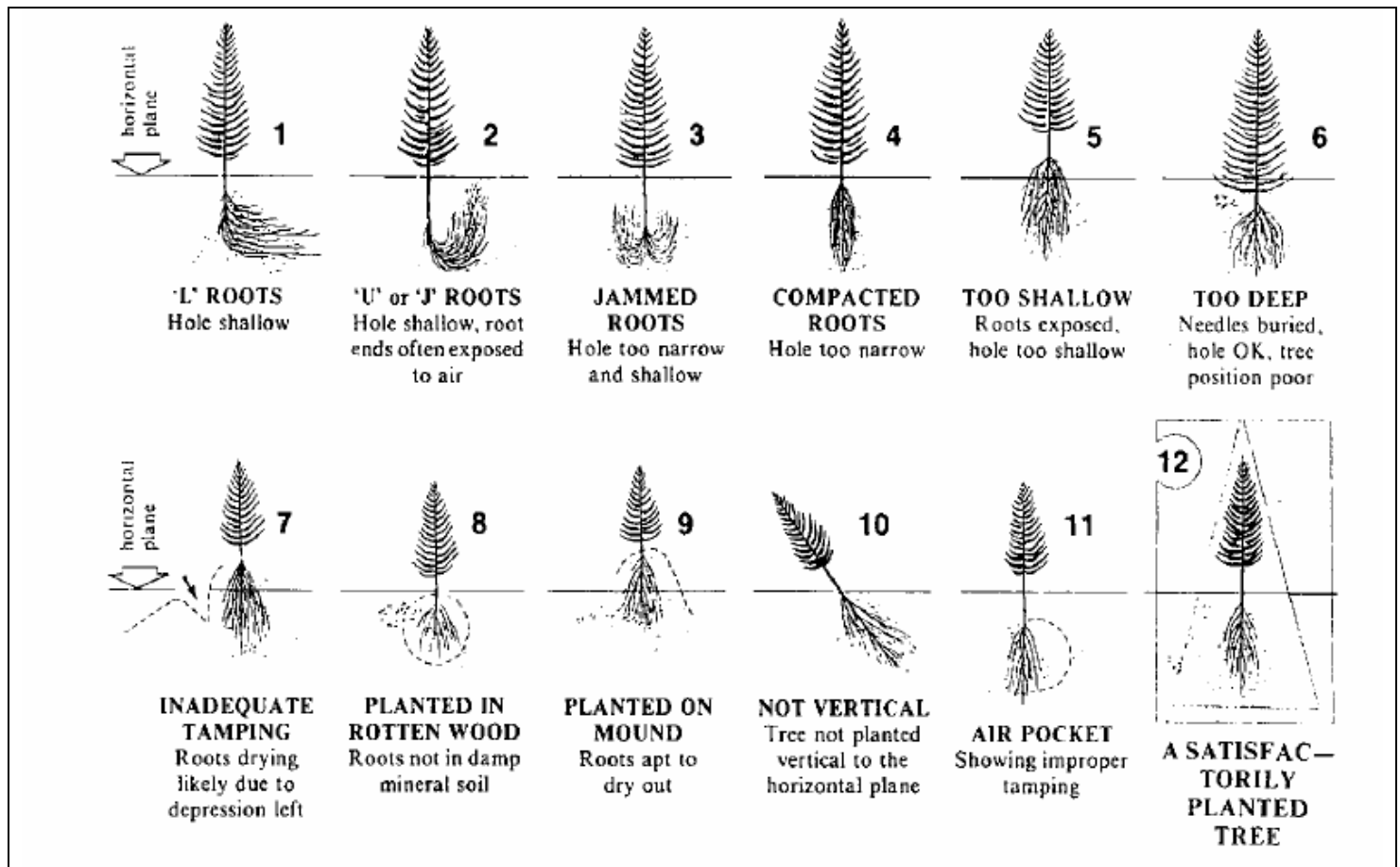
Questions regarding the planting or maintenance of the tree/Shrub establishment should be directed to:

at \_\_\_\_\_





One method of long-term tree storage is the “heeling-in” technique.  
Roots must be packed tightly in the soil and kept moist.  
The heel-in trench must be shaded and protected from the wind.



Drawings 1 – 11 illustrate various ways that seedlings **SHOULD NOT** be planted.  
The ideal planting is shown in drawing 12.

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